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Grading Dressed Turkeys



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UNITED STATES DEPARTMENT OF AGRICULTURE

FROM the producer's standpoint, the correct grading of turkeys is important to the success of his enterprise. Without dependable grading, successful marketing is practically impossible, and without successful marketing, little profit may be expected.

Whether the producer grades his own turkeys or has this done by a licensed grader, familiarity with the quality and grade descriptions and how the grades are applied will create a mutual understanding and be a source of satisfaction to producers, graders, and buyers.

How to grade according to Government standards can be learned by any producer who makes a thorough study of the quality factors involved. This bulletin attempts to point out by description and illustration the most important of these factors.

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Grading Dressed Turkeys

*By Poultry Branch, Production and Marketing Administration,
United States Department of Agriculture¹*

IMPORTANCE OF CAREFUL GRADING

THE marketing of poultry is highly competitive in the terminal wholesale markets. There is always a demand for turkeys of good quality, but stock of poor quality is sold to the less discriminating trade at lower prices. The "straight-run" pack of turkeys is no longer in demand, for buyers are coming more and more to require uniform and careful grading.

Even turkeys of good quality have little sales appeal unless they are carefully graded and packed. Some buyers want only small turkeys, some want those of medium size, and others want the heaviest ones that can be obtained. Some prefer hens; others young toms. Some want only the highest quality obtainable, whereas a few want medium-priced or low-priced stock.

To satisfy these varying demands, the careful packer should grade his turkeys strictly in accordance with definite standards for quality, so that a buyer who wants a number of turkeys of a certain weight and grade will not be obliged to buy several boxes or barrels of them in order to get what he needs. A few birds of second or third grade in a box or barrel of fine turkeys are likely to reduce the price of the entire pack. Careful grading and correct methods of packing usually enable the producer or shipper to establish a reputation for his produce, which is reflected in an increased demand for it and in larger profits for him.

ADVANTAGES OF USING GOVERNMENT STANDARDS FOR DRESSED TURKEYS

The universal acceptance and the correct use of the Government standards and grades for dressed turkeys, certified by graders supervised by the Government, should benefit producers, dealers, and consumers. It would assure the producer a just and uniform grading, making it possible for him to market his turkeys on a basis commensurate with their quality. The turkey producer should receive a price commensurate with the quality of birds he sells and not be penalized by the lower price which the buyer often pays for ungraded turkeys, because he must make enough on the better birds to offset his losses on those of poorer quality.

¹ Earlier editions of this bulletin were prepared by Thomas W. Heitz, formerly marketing specialist of the Bureau of Agricultural Economics, of which the poultry-grading work was a part until July 1939. The work is now carried on by the Production and Marketing Administration.

When turkeys are sold subject to grading by the buyer, the producer is at a loss to know how the buyer will grade them. When the crop is short or a rising market appears probable, there is a tendency for most buyers to grade freely in order to place as many turkeys as possible in the top grade. When the market is declining, commercial grading is usually rigid, and many turkeys that should be placed in the top grade are placed in a lower grade.

The Government standards, on the other hand, are not changed to meet local or temporary market conditions or during a current marketing season. (They are, of course, revised from time to time to meet significant long-time changes in the character of the product or in marketing practices.) The Government grades are so supervised that the producers are assured of uniform grading when the Government standards are used. Since the grading work was begun under Government supervision, the quantity of dressed turkeys graded has increased each year. Approximately 102,000,000 pounds were graded in 1948.

A notable result of the grading program has been the improvement in the quality of the birds offered for sale by producers who have sold their turkeys under this system of grading for several seasons. Almost without exception, the percentage of those that qualified for the top grades has increased each year. In some States where approximately half the crop was of A Quality at the beginning of the program, the percentage of birds of that quality has increased materially. It is not unusual now in some States to find a very high percentage of the turkeys sold by grade to be of A Quality.

The advantages of uniform grading according to uniform standards are almost as great for the country packer and shipper and the city dealer as for the producer. Under the usual commercial conditions the terminal-market receiver is handicapped in buying turkeys when he buys at country shipping points that are too distant to permit personal inspection. The producer's or shipper's idea of an "A" or a "B" turkey may not conform to the idea of the receiver or buyer. Commercial ideas of grading differ in different sections of the country, sometimes among different packers in the same section. In some markets it may happen that no two packs of turkeys received have been graded according to the same standards.

If Government standards and uniform methods of grading and packing were generally adopted, buyers would have more confidence when making their purchases, and producers and shippers, knowing their product would be graded by a qualified disinterested grader, would have less hesitancy in offering their turkeys for sale on a graded basis.

When disputes arise between buyer and seller, the producer, as well as the receiver, has recourse to an official regrading of the turkeys at terminal markets as part of the United States grading service. This regrading service has saved producers thousands of dollars and has safeguarded the receivers, who are often required to pay for carlot shipments of turkeys before they are unloaded.

From the standpoint of the consumer, a tag that gives the correct grade is a valuable guide in the selection of a turkey. The producer should always bear in mind that it is the consumer's willingness or ability to pay that finally decides the price the producer will receive. Therefore, consumers must be satisfied if turkey production is to be

profitable. The best way to satisfy consumers is to make sure that each one always gets the grade of turkey she pays for.

The average housewife buys a turkey only once or twice a year and usually is not so well informed regarding the factors that make for quality in a dressed turkey as she is regarding other meat products. Consequently, she feels more confident in her selection if the bird is labeled with a tag that shows its real grade.

UNITED STATES STANDARDS FOR DRESSED TURKEYS

The United States specifications for dressed turkeys provide for classes, standards for quality of individual birds, suggested weights, and grades. They are a part of the Revised United States Specifications for Standards for Live, Dressed, and Ready-to-Cook Poultry, copies of which may be obtained from the Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

As used in the specifications, a standard and a grade are defined as follows: (1) A standard for quality refers to a factor or group of factors that describe those characteristics of a product which determine its relative degree of excellence; (2) a grade refers to a single product or group of products of a specified quality, class, and weight, or certain percentages of various specified qualities within a class or within a weight classification. The specifications provide for three standards for quality, A, B, and C, as the basis for three grades, U. S. Grade A, U. S. Grade B, and U. S. Grade C.

United States Classes for Dressed Turkeys

The United States specifications for poultry provide five classes for dressed turkeys: Fryers, Young Hens, Young Toms, Mature (Old) Hens, and Mature (Old) Toms.

SCHEDULE OF CLASSES AND METHODS OF PROCESSING FOR DRESSED TURKEYS

Age and sex classification	Dressing and packing classification
Fryers-----	{ Picking: Dry picked. Nonscalded. Semiscalded. Scalded. Dressing: Dressed (undrawn). Ready-to-cook. Packing: Dry. Iced.
Young Hens-----	
Young Toms-----	
Mature (Old) Hens-----	
Mature (Old) Toms-----	

These five classes for dressed turkeys are necessary because of differences in their market value. The young birds are always worth more than the old ones; certain classes of trade prefer hens; others

prefer toms. For the Thanksgiving and Christmas trade, the hens and small young toms are usually in greatest demand, as most of the turkeys for the holiday trade are retailed for family use. Some large toms are also purchased by the homemaker during the holiday season when large family gatherings are the custom. For many years the large toms have been most in demand by restaurants and hotels for their pre-season or postholiday trade. But with modern methods of processing and holding, turkey is rapidly becoming a year-round treat. Hotels and restaurants feature turkey on their menus almost as frequently as they feature other poultry. And the large toms, eviscerated or "ready-to-cook," are sold as "turkey cut-ups" on many markets. Turkey half- or quarter-roasts, turkey steaks, and disjointed parts—breasts, legs, wings, and backs—are gaining in popularity. The classes, the standards for quality, and the grades form the basis also for the grading of ready-to-cook (eviscerated) whole turkeys and turkey parts.

The very small, young turkey, about 3 months old and weighing about 4 to 6 pounds dressed, is marketed in sections of the country where there is sufficient demand for this delicacy. This turkey is classed as a fryer.

Young birds can be determined by the appearance of the flesh and by the flexibility of the breastbone. The flesh of the young bird is fine-grained and soft, whereas that of an old turkey is coarse, somewhat darkened, and tough. The tenderness of the flesh can be determined by pressing the flesh of the breast between the ends of the thumb and forefinger. If the bird is young, the flesh can be easily penetrated, and the thumb and finger will easily press through to the breastbone. If the flesh is hard and "rubbery" it is an indication of greater age, and more roasting will be required to make it tender.

The relative age of the turkey whether young or mature can be ascertained by feeling the keel bone. If the cartilage on the end of the bone is flexible and moves back and forth easily, the turkey is young. If the bone is hard and rigid so that it cannot be moved, the cartilage has hardened into bone and the turkey is classed as Mature.

Further indications of age are evidenced by the appearance of the skin. Mature turkeys usually have a coarse skin, and unless they are very fat the skin is loose and flabby, whereas the skin of the young turkey adheres more closely to the flesh and is soft and velvety. Feather follicles in the skin of the mature birds are deeper and farther apart, giving the skin a rough, uneven appearance.

CLASSIFYING YEARLING HENS AND STAGGY TOMS

It is not difficult to differentiate between a very old turkey and a very young one, but there are many turkeys of intermediate age, such as yearling hens and staggy toms, that may be difficult to classify. Usually a turkey is classed as Young until it reaches 8 to 10 months of age, but this is not always the case. The breastbone of a young hen nearing the age of 10 months is usually rather rigid, and the flesh begins to take on the characteristics of a mature hen. Breeding and laying have a tendency to harden the flesh of the hen turkey; and although it is true that many young hens begin laying at 5 or 6 months of age and are still soft-meated, the characteristics of a mature hen soon show after the laying season begins. Hens that have been laying have a greater width between the pelvic bones, and the vent is moist

and somewhat enlarged. Where these conditions are apparent the usual practice is to classify the turkey as Mature, especially if the keel bone has become somewhat rigid and the flesh is coarse and darkened. Where the turkey appears to have tender flesh, even though the keel bone is only slightly flexible, the bird is classified as Young. Usually a hen turkey will not take on excessive fat until the second year. When such fat appears, it is a fairly good indication that the turkey should not be classed as Young.

The correct classification of a young tom nearing maturity is highly important, because the age of a young tom, unlike the age of a young hen, is an important factor in the grading of the bird. For example, a hen nearing maturity may be classed as Mature or Young without the grade being affected. However, a tom nearing maturity and showing staggy characteristics, is usually classed as Young but is not graded in a quality above B. One of the first indications of approaching maturity in a tom is spur development. Spurs appear as little knobs on the legs long before the flesh has become hardened and are not always an indication of age. A young tom shall never be graded down on account of spur development alone. Rather, the appearance of spurs indicates that a close examination of the bird is desirable. As long as the meat is soft and fine-grained and the keel bone is flexible the turkey should be classed as Young. As a young tom develops, the skin of the breast becomes soft and flabby, and, as development further progresses, it becomes badly puffed and pouchy. After this condition develops, the turkey may still be classed as Young if the meat is still somewhat softened, but the turkey should not be graded higher than B Quality. If the breast is only somewhat softened and not puffed, the turkey may be graded as A Quality.

Occasionally a turkey is found in which sexual development is such that classifying it is difficult. The body may be long and rangy and have the appearance of that of a young tom, while the head may be fine-cut and narrow, as characteristic of a young hen. By an examination of the vent of such birds, as is done in sexing baby chicks, the true sex can usually be determined. It is usually best to place such a turkey in the class to which its body most conforms, so that the appearance of the pack will not be spoiled by a lack of uniformity of body shape.

SUPPLEMENTAL INFORMATION ON PROCESSING METHODS

Other conditions, which relate to picking, dressing, degree and method of chilling, and packing, make it necessary to establish further classifications.

PICKING.—Four methods of picking the feathers from turkeys are used: The scald, the semiscald, nonscald, and the dry-picked. Each of these methods has a direct bearing on the appearance and keeping quality of the turkeys. Therefore, in classifying and grading dressed turkeys the method by which the carcasses have been picked is important as related to skin blemishes and general appearance.

The scald method is used mostly when producers dress and market their turkeys locally. The carcass is immersed in water usually heated to a temperature of from 170° to 180° F. The hot water opens the skin pores, makes the skin very tender, and lowers the keeping quality of the bird. The effects of scalding are so damaging to the skin

that turkeys which have been picked by this method may frequently be lowered in grade.

The semiscald method is used chiefly by dressers at country packing plants. The carcass is immersed for about 30 seconds in water heated to a temperature of from 125° to 128° F. For satisfactory results the temperature of the water must be within this range. An operator should not attempt to use this method unless he is properly equipped and has acquired a knowledge of its operation through an experienced workman. The method has many advantages over full scalding and dry picking. The skin is not injured, and resulting conditions are such that the pinfeathers are readily removed.

The nonscald method is relatively new and consists of immersing or spraying with water below 120° F. before removing feathers. Birds picked by this method have a similar appearance to birds that have been semiscalded.

The dry-picking method is used by both producers and packers who ship to distant markets, and in some sections of the country turkeys are dry-picked for the local markets. No water is used. The feathers are loosened by piercing the lobe of the brain which controls the feather muscles. The producer who dresses his own turkeys may find this method of picking the most satisfactory and should not attempt any other method without the advice of a skilled operator.

DRESSING.—Dressed turkeys are usually marketed either as undrawn (New York dressed) or eviscerated (ready-to-cook). At the present time, many turkeys are marketed undrawn, that is, the head, feet, and viscera are not removed. During the last few years, however, the quantity of eviscerated or ready-to-cook poultry, including not only turkeys but chickens and ducks, has increased steadily. Ready-to-cook turkeys are prepared under Government inspection and in the process are completely cleaned and made ready for the oven. These are usually individually packaged to give greater protection from the time they are processed until they are delivered to the consumer.

CHILLING.—Dressed turkeys may be marketed as fresh-dressed, fresh hard-chilled, or storage stock. The chilling condition of turkeys should be taken into consideration when they are graded. Fresh-dressed turkeys are those that have been neither hard-chilled nor hard-frozen. Fresh hard-chilled turkeys are those that have been held at low temperatures but do not show any bad effects from freezing and holding conditions. Turkeys should not be held in cold storage for any length of time unless they are properly wrapped and packed. Turkeys not wrapped with suitable packaging materials and held at low temperatures for 60 days or more show evidence of deterioration. The most noticeable effects of storage on poultry are dryness of skin and loss of body bloom. Dry, scaly areas and pock marks, known as "freezer burn," may also be present on the surface of the skin. The eyes may be shrunk and discolored, and the blood around the cavity of the mouth, or where the bleeding cut was made, may be dark brown instead of red in color.

Frozen or storage dressed poultry of that type should not be confused with drawn or eviscerated frozen poultry which had been individually packaged in a suitable manner and with materials that will afford the utmost protection against freezer burn and discoloration.

Turkeys frozen and packaged in this manner should retain their original quality and appearance for many months; they are usually marketed as ready-to-cook poultry.

PACKING.—Two methods of refrigerating are used to keep dressed turkeys in good condition during transit to market. One uses ice; the other, cold air. Dressed turkeys that have been packed in ice are known as ice-packed; those that have been subjected to cold air are known as dry-packed. When dry packing is used, the air is cooled by ice or by mechanical refrigeration; the turkeys are kept dry and do not come in direct contact with the ice.

Standards for Quality of Individual Birds

When a turkey is graded for quality according to the U. S. standards for individual birds, the following factors must be considered: Conformation; fleshing; fat covering; discolorations; dressing defects; and freezer burn.

A Quality: To be classified as of A Quality (fig. 1) and identified by a U. S. Grade A label, a turkey must be of normal physical conformation. It may have a slightly curved breastbone, or other slight abnormality in the shape of the breastbone, that does not interfere with the normal distribution of the flesh. A dent in the breastbone shall not exceed one-quarter inch in depth. The bird may also have a very slightly crooked back.

The bird shall have a well-developed, moderately broad, and long breast that is well-fleshed over its entire length. The flesh shall carry sufficiently well up to the crest of the breastbone so that the breastbone will not be prominent. The bird's legs shall also be well covered with flesh.

The breast, back, hips, and pin bones of young turkeys shall show fat, and in mature turkeys these parts must be well covered with fat.

A dressed turkey of A Quality shall have only a scattering of pin-feathers, practically none of which shall be on the breast; it shall be free of hair.

An A Quality turkey shall have no discolorations or blemishes of the skin, from any cause, which together exceed an area of 2 inches in diameter on the breast and legs, and 3 inches in diameter elsewhere on the carcass. If discolorations or blemishes are the result of skin bruises, showing a slightly reddened condition, such bruises may cover only approximately half the areas indicated above. An A Quality bird shall have no bruises or discolorations of the flesh on the breast and legs. A flesh bruise may be distinguished from a skin bruise by moving the skin from side to side. A skin bruise is a blood clot attached to the inner skin and will move as the skin is moved. If the blood clot remains stationary and does not move with the skin, the bruise is a flesh bruise. An A Quality bird may have only a slight reddening, owing to improper bleeding, in the feather follicles on the neck near the head and on the wings.

There shall be no tears on the breast and legs of an A Quality bird. Tears and cuts elsewhere on the bird shall not exceed 3 inches in aggregate length. No sewed tears are permitted. A disjointed leg or wing is permitted if there is no appreciable bruise or blood clot.

A bird of this quality may have only very slight freezer burn on the neck or wings (small pock marks or evidence of them) not exceeding one-eighth inch in diameter.

The crop must be empty. However, if the crop is not empty when the bird is killed, it may be washed out or removed through a small opening in the back of the neck. Only dry-picked birds, or wet-picked birds that show no skin damage from high temperature of the water or length of time in the water, are permitted in A Quality.

B Quality: To be classified as of B Quality (fig. 2) and identified by a U. S. Grade B label, a turkey must be of normal, or practically normal, physical conformation. It may have a dented, curved, or slightly crooked breastbone, if this does not seriously interfere with the normal distribution of the flesh. The bird may also have a moderately crooked back or misshapen legs or wings.

The B Quality turkey must be sufficiently well fleshed on the breast and legs to avoid a thin appearance and a very prominent breastbone.

The bird shall have sufficient coverage of fat to prevent a dark red appearance of the carcass.

A dressed turkey of B Quality shall be reasonably free of pinfeathers, with only a slight scattering on the breast; it shall be free of hair.

The bird shall have no discolorations or blemishes, from any cause, which together would exceed 3 inches in diameter on the breast and legs, and 6 inches in diameter elsewhere on the carcass. The total aggregate areas of flesh bruises shall not exceed 1 inch in diameter on the breast and legs, and 3 inches in diameter elsewhere on the carcass, and skin bruises shall not exceed 1½ inches and 3 inches, respectively. There may be some reddening, owing to improper bleeding, in the feather follicles on the neck near the head, and on the wings of the bird.

Tears and cuts are permitted on a B Quality turkey if the aggregate length of such tears and cuts do not exceed 3 inches on the breast and legs and 6 inches elsewhere on the carcass. No sewed tears are permitted. Two disjointed bones are permitted if there is no appreciable bruise or blood clot showing. The bird may have one non-protruding broken wing or leg bone if it does not show an excessive bruise or blood clot.

Moderate freezer burn or evidence of small pock marks one-eighth inch in diameter on any part of the carcass is allowed, but there shall be no dried areas in excess of one-half inch in diameter.

The requirements concerning feed in the crop are the same as for A Quality birds. A bird may be dry picked, or it may be wet picked (nonscalded, semiscalded, or scalded).

C Quality: A turkey of C Quality (fig. 3) may be of abnormal physical conformation, having such defects as a crooked back, crooked breastbone, or other serious abnormalities, providing it has the fleshing requirements for at least a B Quality bird, or, if of normal physical conformation, it may be poorly fleshed, with a narrow breast and with legs poorly covered with flesh.

A C Quality bird may be entirely lacking in fat covering over all parts of the body.

A turkey of C Quality may have pinfeathers and hair scattered over the entire carcass, providing they do not seriously detract from its appearance.

The bird may have slightly reddened areas on the breast and thighs, or have other parts of the skin excessively reddened because of poor bleeding. There may be numerous and large discolored areas or blemishes of the skin from any other cause. These may be accompanied by some reddening and darkening of the flesh beneath the skin, so long as such condition does not cause any part of the carcass to be unfit for food.

The turkey may have open tears of any size, disjointed bones, or broken nonprotruding bones if not accompanied by a severe bruise or blood clot.

Severe freezer burn, showing numerous pock marks and large dried areas or evidence thereof, is permitted on any part of the carcass.

The requirements concerning feed in the crop are the same as for A and B Quality birds. Birds of A, B, and C Qualities may be either dry picked or wet picked (nonscalded, semiscalded, or scalded).

United States Grades for Dressed Turkeys

There are three grades for dressed turkeys, U. S. Grade A, U. S. Grade B, and U. S. Grade C. Individual turkeys may be officially identified with a U. S. Grade A or a U. S. Grade B label only if they are of A Quality or B Quality (figs. 1 and 2), respectively, and of a specified class. C Quality turkeys may not be individually grade labeled. (Fig 3.)

The container of any lot of dressed turkeys may be officially identified with a U. S. Grade A or a U. S. Grade B stamp provided all the birds in the lot are of one specified quality (A or B) and are individually grade labeled. Birds packed in bulk or institutional packages that are not individually grade labeled shall all be of the same class and quality except for permitted tolerances as stated in the grade specifications.

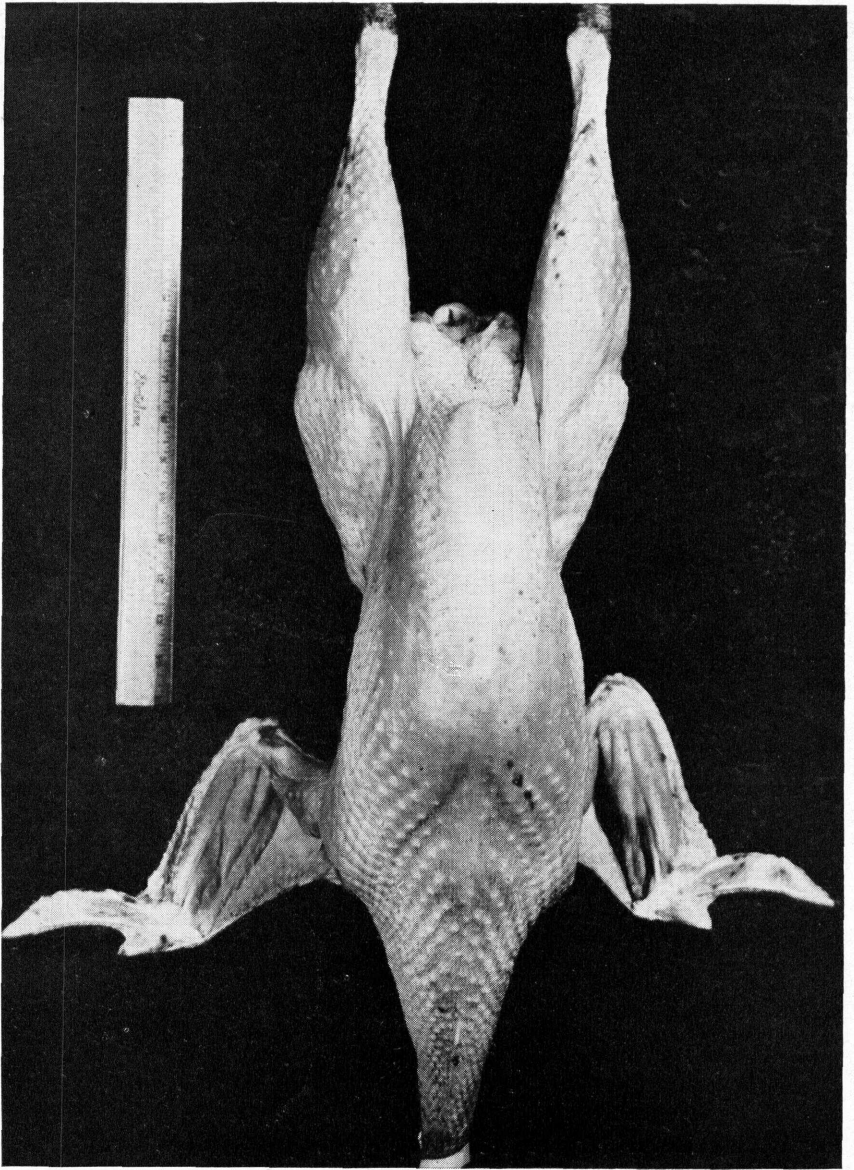
RULES APPLYING TO ALL CLASSES, QUALITIES, AND GRADES

A few general requirements apply to all classes, qualities, and grades of dressed turkeys. When turkeys do not meet these requirements, they are placed in a lower quality or grade than their other characteristics would indicate, or they are thrown out of grade entirely. These general requirements relate to a number of conditions, such as freezing, cleanliness, precooling, feed in crop, picking, wholesomeness, and emaciation.

Freezing

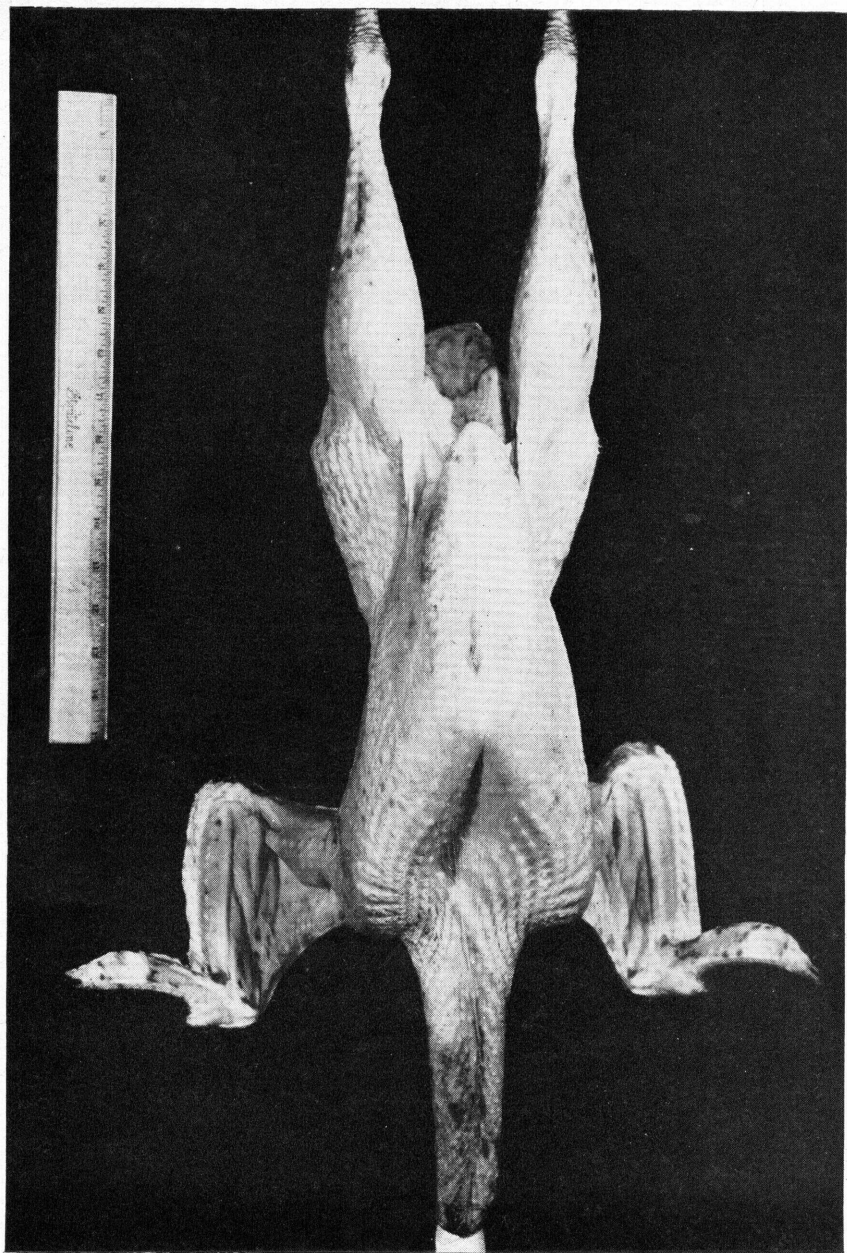
It is possible to hold turkeys a few weeks in storage under proper temperature without their deteriorating noticeably. When marks of freezing do not appear on the carcass or are not sufficient to affect the quality of the flesh, the grade of the carcass is not lowered, even though the carcass has been frozen.

Turkeys that show more than a scattering of small pock marks or any dark, blistered, or dried skin caused by freezing cannot be graded



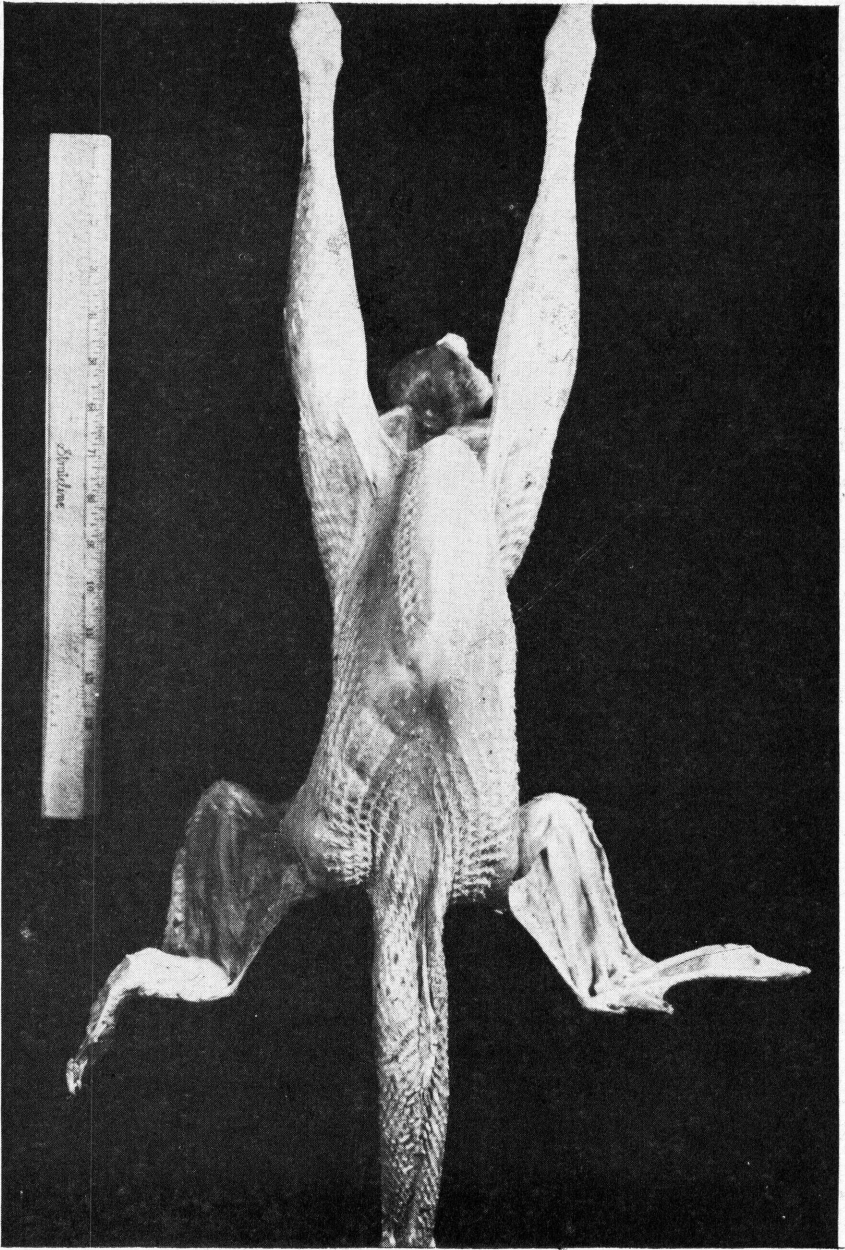
17491 PMA neg.

FIGURE 1.—A young hen turkey of A Quality: A soft-meated, well-fleshed bird, well covered with fat. It is well-bled, well-dressed, and practically free of pinfeathers, especially on the breast. This bird may bear a U. S. Grade A label.



17492 PMA neg.

FIGURE 2.—A young hen turkey of B Quality: A fairly soft-meated, fairly well-fleshed bird, fairly well covered with fat. It is fairly well-bled and fairly well-dressed. This bird may bear a U. S. Grade B label.



17493 PMA neg.

FIGURE 3.—A young hen turkey of C Quality: A bird of this quality may be coarse-meated, poorly fleshed, and poorly covered with fat. It may show evidence of poor bleeding and may be poorly dressed.

as A Quality. Usually, when turkeys not protected by suitable packing material are held at a subfreezing temperature for 60 days or longer, the skin, after being thawed, loses its bright, fresh appearance of "bloom," and the meat has a darkened appearance. If this occurs, the turkey is lowered one quality or grade. If the skin or flesh shows marked effects of freezing, and if dry, scaly spots appear over the entire carcass, the turkey cannot be graded higher than C Quality. (Fig. 4.) For example, a turkey may be of A Quality when put into storage but may be of B Quality or lower when it comes out of storage.

Cleanliness

A turkey that has a dirty carcass or dirty head, feet, or vent, cannot be placed in any of the qualities or U. S. grades. Dirt and filth are a cause of spoilage, and any condition that would tend to unwholesomeness throws the turkey out of grade. Clotted blood in the head turns sour rapidly and gives an offensive odor to the entire carcass. Feet that are caked with manure or dirt are full of contamination that will affect the meat of the carcass with which it comes in contact. Dirty vents may turn the surrounding meat green within a few hours. If the carcass is to meet any standard for quality the feet and head must always be washed, the vent squeezed out, and any condition that may make for unwholesomeness must be prevented.

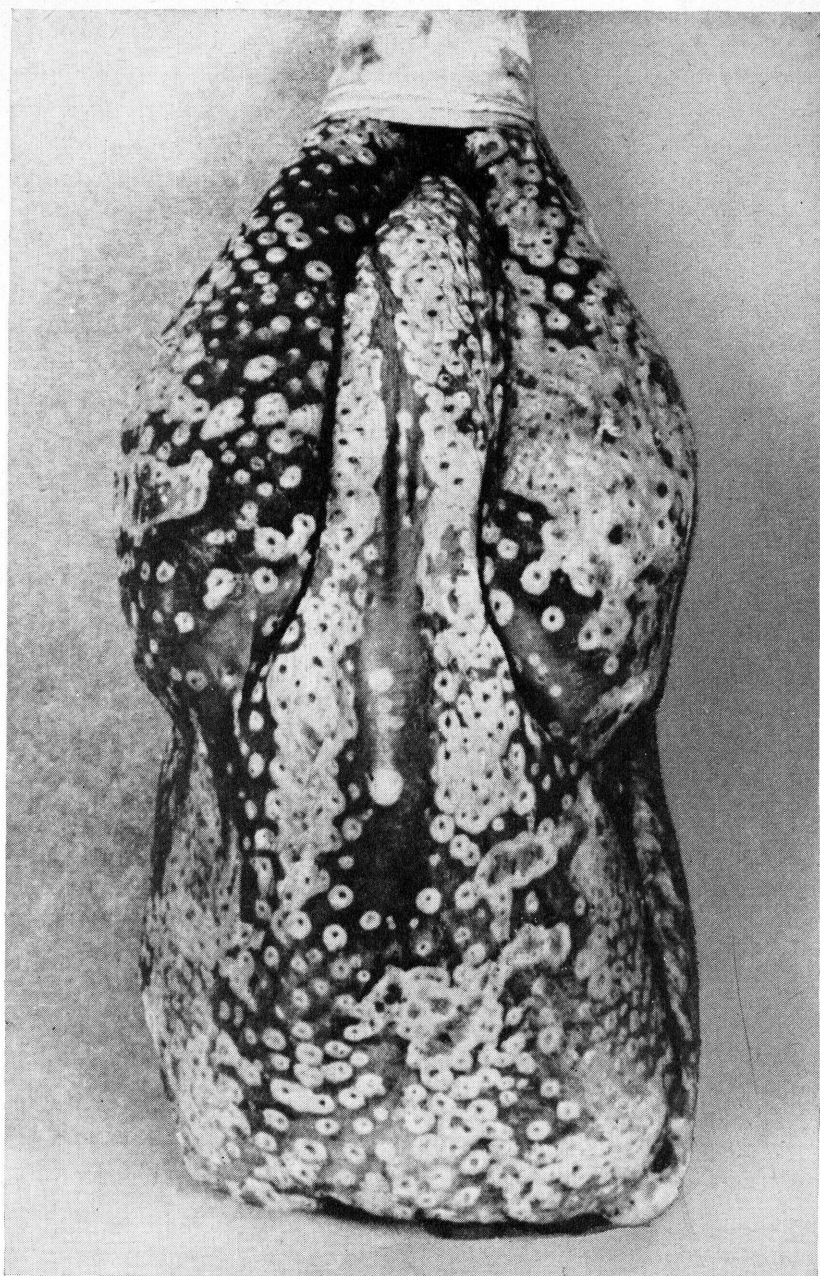
Precooling

Turkeys that have not been properly precooled, so that all animal heat is removed from the carcass before it is packed, are likely to deteriorate in quality and even become unfit for food. Graders must be equipped with thermometers for taking internal temperatures and must make sure that the turkeys, when packed, do not have an internal temperature higher than 36° F. A lower temperature than this is desirable, and if practicable the temperature should be reduced to 34° F. before the turkeys are packed, unless they are ice-packed in which case 40° F. is adequate.

In actual practice it may be necessary for the grader at times to grade turkeys before they have been sufficiently cooled, in order to avoid rehandling or the mixing of the producers' lots. When this is done, the grader must make sure the birds are properly precooled after they are graded. Unless the birds are sufficiently cooled beforehand, or will be cooled under supervision of the grader, it is not permissible to grade the birds in accordance with Government specifications.

Feed in Crops

An enormous loss is sustained by the turkey growers each year because of feed left in the crops. Feed in the crop not only spoils the appearance of the carcass but lowers its keeping quality. The feed ferments soon after the turkey is killed and gives off a sour odor which penetrates through the crop and causes the surrounding meat to turn sour. The skin over the crop often darkens and eventually turns dark green or black. Feed in the crop is not permitted in any of the standards for quality or United States grades. (Fig. 5.)



15525 PMA neg.

FIGURE 4.—A turkey showing extreme freezer burn. Pock marks and dry, scaly spots cover such a large part of the carcass that this bird must be lowered to C Quality. It is below the quality that can be identified by an official grade label.

Picking

Many turkeys, because of defects in picking, are placed in a lower grade than their fleshing condition warrants. If turkeys are killed before they are mature it is very difficult to remove all the pin-feathers even though a great deal of time and care are given to that task. The garters of feathers around the hocks must always be removed, as well as all the tail and neck feathers.

During World War II fan feathers were permitted because of equipment shortage. Now, however, they must be removed before the bird can qualify for any U. S. grade. Fan feathers often carry dirt and filth, are unsightly, and are difficult for consumers to remove. (Fig. 6.)

Wholesomeness

It is emphasized again that dressed turkeys, when packed, should be free from any condition which may render them unwholesome as food. The condition and wholesomeness of the carcass are determined largely by external appearances. Decomposition is first manifest in those parts of the carcass in which the viscera lie close to the surface of the skin. It is evidenced around the vent, between the keel and pelvic bones, and along the surface of the ribs. The meat first turns dark and then green. A condition of this kind is caused by decomposition from within the birds and is usually the result of improper precooling or failure to maintain them at a sufficiently low temperature.

The green appearance of the skin in off-condition turkeys is caused by intestinal putrefaction and the consequent production of hydrogen sulphite, which penetrates the thin body wall and acts upon the blood in the capillaries of the skin. Any evidence of this condition in a carcass disqualifies the bird for any standard for quality or any United States grade.

Evidence of such diseased conditions as accompany tuberculosis or blackhead or tumorous growth is an indication of unwholesomeness. Turkeys so affected are barred from the United States grades.

Emaciation

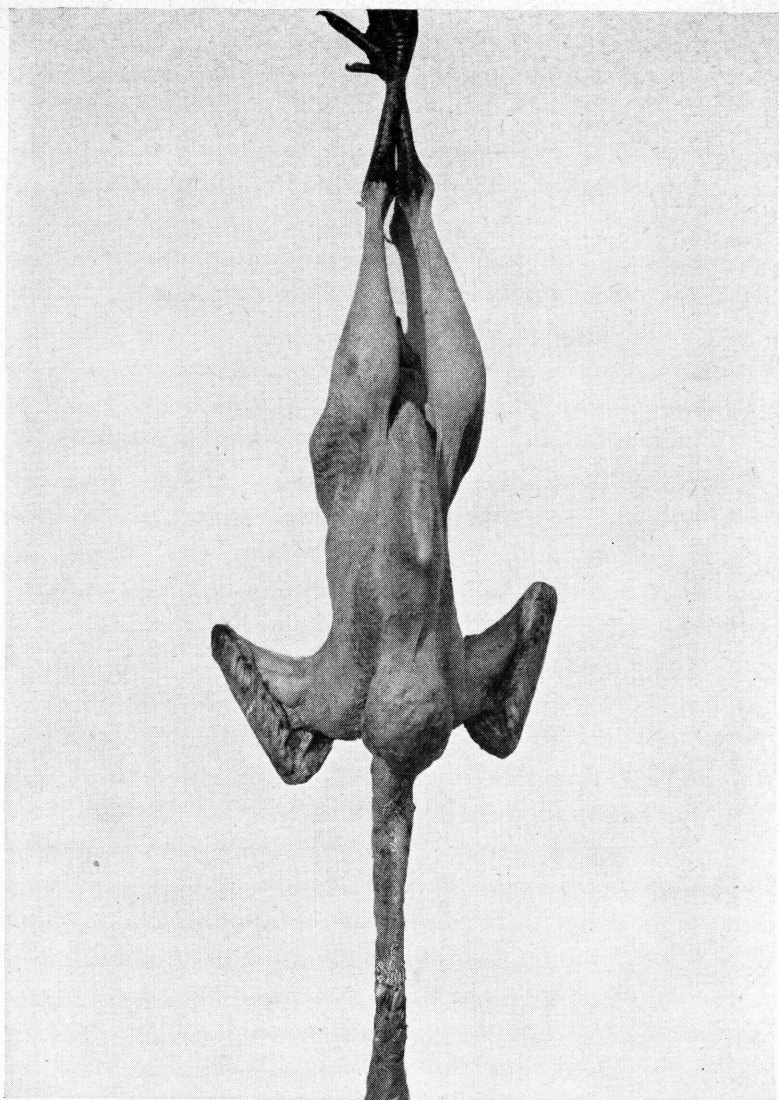
An extremely thin or emaciated turkey will not be graded for quality or placed in any United States grade, for emaciation is an indication of a diseased condition and it is usually impossible to ascertain definitely whether or not a turkey is diseased unless it is eviscerated. (Fig. 7.)

RULES APPLYING TO PACKING

Packages

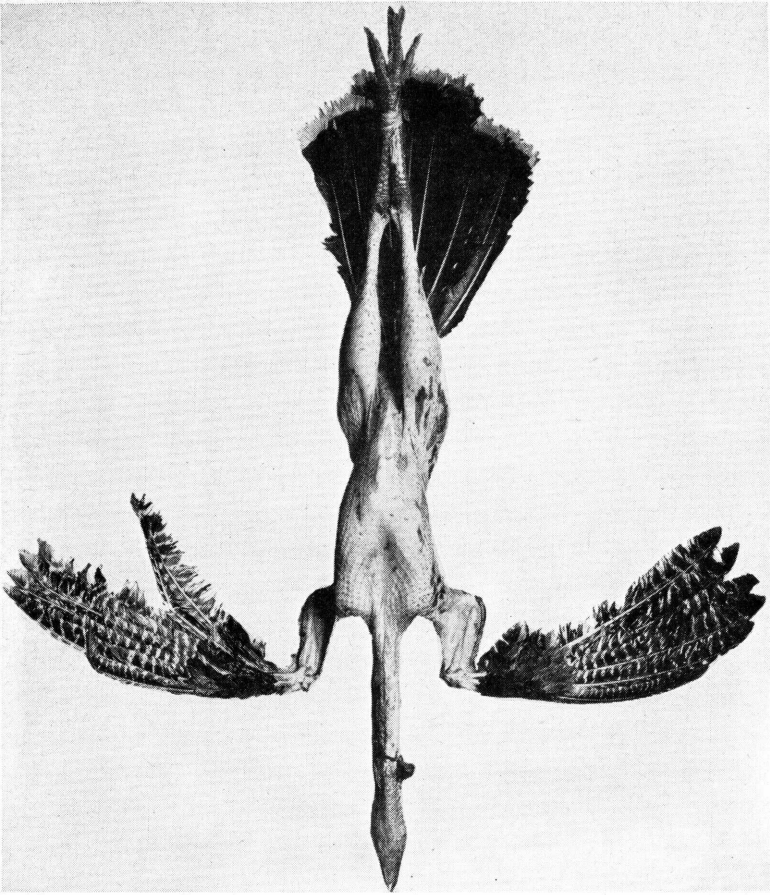
The containers in which turkeys are packed must be clean, odorless, and of sufficient strength to carry the birds in good condition. A soiled package may mean a soiled turkey later, and a broken package may permit the turkeys in it to be damaged. Objectionable package odors may be caused by dirty or moldy packages or by odors that are characteristic of pine or some other boxing material.

Most box-packed turkeys are now packaged in standard veneer wire-bound boxes. These boxes are light in weight, very durable, and are



8819b OD neg.

FIGURE 5.—A turkey with feed in the crop. Regardless of other conditions the grader is not permitted to place this turkey in any of the United States grades unless the crop is properly removed or washed out, after which it may be graded as A, B, or C Quality depending on the other quality factors.



8794 OD neg.

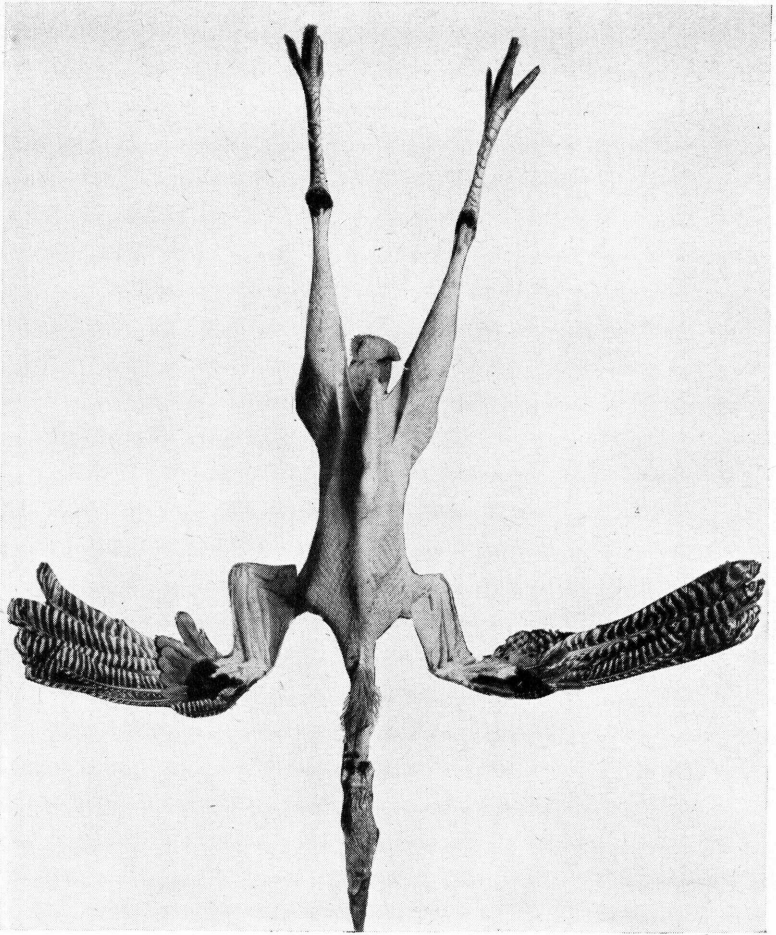
FIGURE 6.—An improperly picked turkey. For sanitary reasons all feathers should be removed.

easily opened and closed. In some areas sawn wood boxes are also used for packing. Where sawn wood boxes are used, they should be made of the best quality lumber, should be free from knots, evenly and accurately cut, and preferably surfaced on both sides. Cement-coated sixpenny nails should be used in the sides and bottom if the boxes are to be nailed, and fivepenny wire nails, not coated, should be used when nailing the cover.

Barrels are used when turkeys are to be ice-packed. The shipments of ice-packed turkeys for immediate consumption have increased in certain areas. Turkeys that are to be frozen and held in storage are packed in boxes, although those intended for immediate use may be ice-packed and shipped in barrels.

Box Lining

The package should always be lined with a parchment or waxed-paper liner of good quality. These liners, if of good quality, not only



8790 OD neg.

FIGURE 7.—An emaciated and poorly picked carcass. Turkeys as poorly fleshed as this are not placed in any United States grade.

keep the turkeys clean but protect them from skin drying and from abrasions caused by rubbing against the sides of the box.

Before stamping the United States grade name or lot number on any box, the grader must see that the box has a suitable liner.

Stamping

An official stamp showing the United States grade of the turkeys contained in the package may be used only by an authorized grader or by someone under his direct supervision. The grade designation should be plainly legible, should be at least three-quarters of an inch in height, and the stamp should be approved by the Production and Marketing Administration before it is used. The grade must be stamped on the end of the box, the stamp being neatly applied in a conspicuous place. Immediately following the grade the class

must always be marked on the package in letters as conspicuous as those used in marking the grade. The number of turkeys in the container and the net weight of the turkeys must also be shown.

Uniformity

Turkeys must be packed with a high degree of uniformity in size and color. Good appearance in a box of turkeys is almost completely lacking if there is lack of uniformity in the pack. The range of weights of the individual birds in a container, except in the case of old toms, cannot vary more than 2 pounds if proper sizing is maintained and if a good solid pack is to be obtained. No matter how good a job the packer may do, the turkeys will not present an even appearance if uniformity in size is not maintained. Light-colored, milk-fed turkeys should be packed separately from the yellow-colored or grain-fed birds. Most markets prefer the light-colored birds, a few prefer yellow-skinned birds, but no market prefers mixed colors in a package.

DEFECTS AND DEFORMITIES TO BE CONSIDERED IN GRADING

Defects are usually caused by poor workmanship in dressing, whereas deformities are usually due to inheritance or to injury or to conditions existing during the growth of the turkey. Any person who grades turkeys should have clearly in mind what is meant by certain terms that are used in describing the standards for the different classes, qualities, and grades.

Bruises

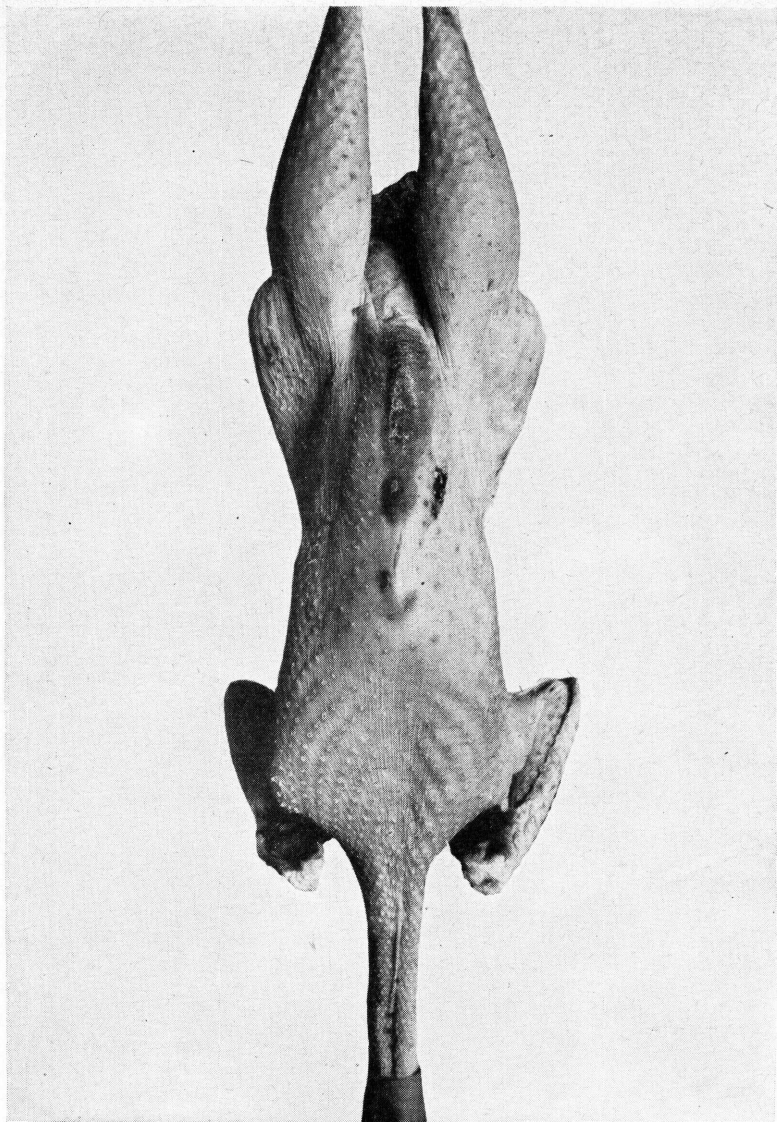
Large numbers of bruised turkeys are found on the market each year, bringing great losses to producers and packers. Improper handling of the live turkeys on the farms and at the packing plants is the chief cause. With proper care this loss could be avoided. A bruise on the breast is considered a much greater defect than a bruise on any other part of the carcass. The extent to which the grade of the carcass is lowered depends on the extent and location of the bruise. (Fig. 8.)

Torn Skin

How serious the effect of a torn skin is depends on the location and the size of the tear. (Fig 9 (left).) When on the back or wings, the tear is not considered so serious as if it is on the breast, and larger tears are allowed on those parts of the carcass. Most tears are due to poor sticking, which makes the feathers difficult to pull. Pulling against the slant of the feathers also causes many tears, especially on the younger birds.

Skin Abrasions

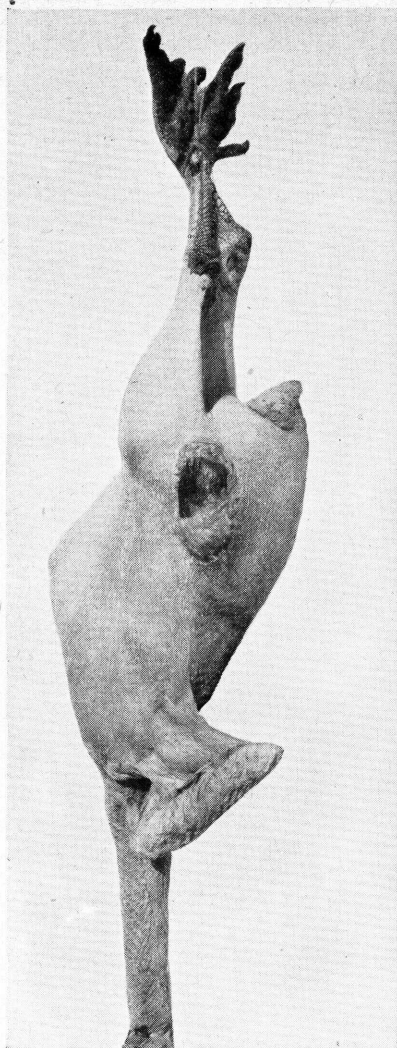
Abrasions are marks on the skin that cause it to be rough and discolored. The damage is usually to the outer layer of skin and does not penetrate to the flesh. Abrasions are usually caused when the turkey is being dressed by rubbing the skin to get the feathers out instead of picking them out. They may also be caused by rough han-



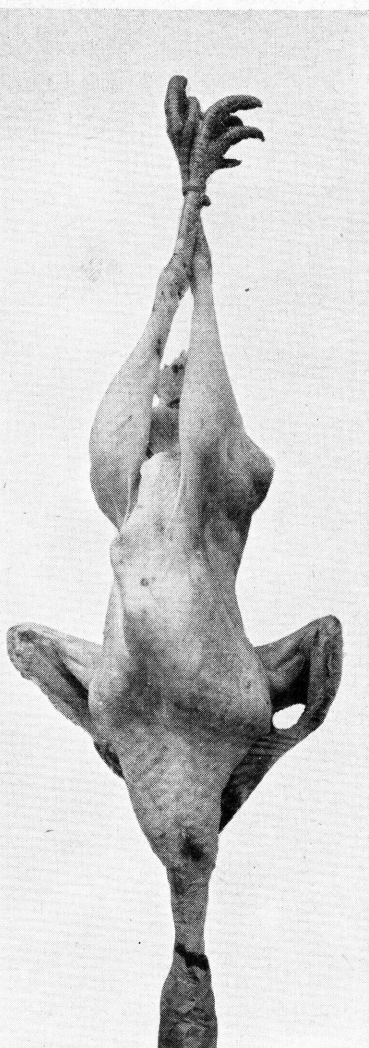
8793 OD neg.

FIGURE 8.—*Turkey with bruised breast. This turkey was graded as C Quality. Except for the bruise, it would have graded A Quality.*

dling after the birds are killed. Abrasions are most common on the leg, near the knee, and on the wings. When the outer layer of skin, or cuticle, is removed by rubbing or “slapping” in dressing, the inner layer turns dark as it dries out from exposure to the air. Abrasions are one of the most objectionable faults brought about by unskillful dressing.



8781 OD neg.



8857b OD neg.

FIGURE 9.—(Left) This A Quality turkey is reduced to C Quality, on account of the amount and location of torn skin. Had the tear occurred on the back or wing, the turkey would have graded B Quality. (Right) Turkey with a crooked breastbone. A deformity as marked as this places the carcass in C Quality.

Poor Bleeding

Good bleeding is highly important. A bird that has been poorly bled soon develops a characteristic "strong" flavor and an offensive odor. Its keeping quality is not so good as it would be if the bird had been well-bled. When a turkey has not been completely bled, small red pin spots show along the tip of the wings and over the hips. If the bleeding was not complete these blood marks show wherever the larger feathers have been pulled. The marks are most noticeable on the tail, along the thigh, and on the streak of fat that extends over either side of the breast. If the bleeding was done very poorly, the neck is blue and discolored from blood clots that form underneath the skin.

Discoloration

Skin discoloration, or reddening, is often caused by the carcasses touching each other on the cooling racks. It may also result from a sweat after they are packed if they are not kept sufficiently cool. If the skin is not thoroughly dry when the turkeys are packed, discoloration is likely to occur wherever one bird rests against or touches another. Usually a slightly bloody liquid will form under the skin at the juncture of contact causing it to appear red. Discoloration of the skin over the crop often occurs if the turkey swallows blood while bleeding after it has been stuck in the mouth.

Crooked Breasts

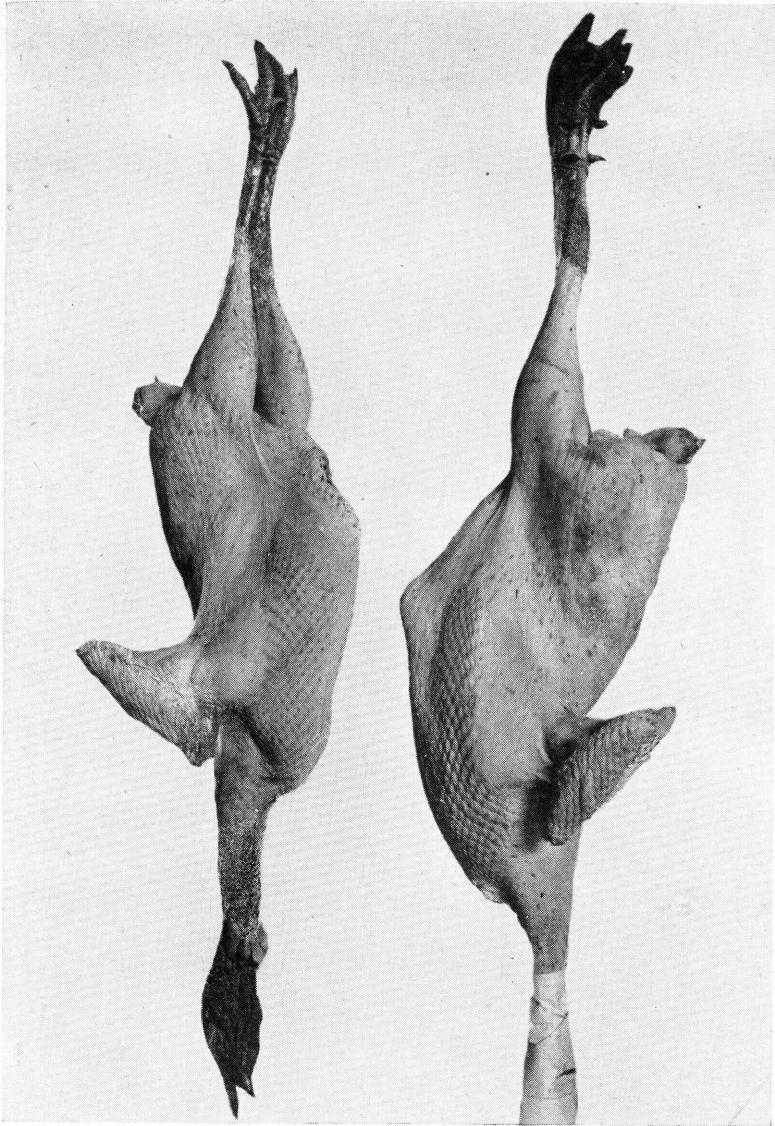
A very crooked breast is a common cause for disqualifying birds for the higher grades. Crooked breastbones, according to most authorities, are sometimes the result of improper feeding—usually a lack of minerals in the feed. Some inherited tendencies also cause weak bony structures in offspring from defective breeding stock. Crooked breasts are not allowed in A Quality. The extent or degree to which the breast is crooked is one of the principal factors in determining the quality. If the breastbone is slightly curved but not crooked, and if the curvature does not interfere with the slicing of the meat, the bird may be graded as A Quality. (Fig. 9 (right).)

Dented Breastbones

A dent is a notch in the breastbone. It is caused by the turkey's resting its breast on the roost. It is not considered so serious a defect as a crooked breast because it does not interfere with the slicing of the breast meat as much as does a crooked breast. (Fig. 10.)

Peaked Breasts

A peaked breastbone results in a deformed breast and should be considered equivalent to a crooked breast. It does not affect the eating qualities of the meat, but lowers the commercial value of the bird considerably from the standpoint of appearance and may put the bird as low as C Quality. (Fig. 11 (left).)



8791 OD neg.

FIGURE 10.—Turkeys with dented breastbones. The dent in the breast of the turkey on the right measured one-eighth of an inch in depth; the one on the left, one-fourth of an inch in depth.

Crooked Backs

Any deformity in the bones of the back which throws the body out of line is known as a crooked back. Usually such a deformity is not noticeable when one is looking at the breast of the turkey, and it is far less serious than a hunchback as it does not throw the meat of the breast out of line. A turkey with a crooked back cannot be graded above B Quality.

Hunchbacks

A hunchback is considered as a major deformity in a turkey. If the bird is fairly well-fleshed it may be placed in C Quality, but if not, the bird will be below any quality or grade. Such turkeys, even when well-fleshed, bring low prices. (Fig. 11 (right).)

Stagginess

Producers often make the mistake of holding their young toms until the flesh is no longer fine-grained and tender. The bird must then be graded as a lower quality. In grading chickens a separate class is provided for such birds, and they are called stags, but such is not the case with turkeys. Instead, they are placed in a lower grade. (Fig. 12 (left).)

Blue Backs

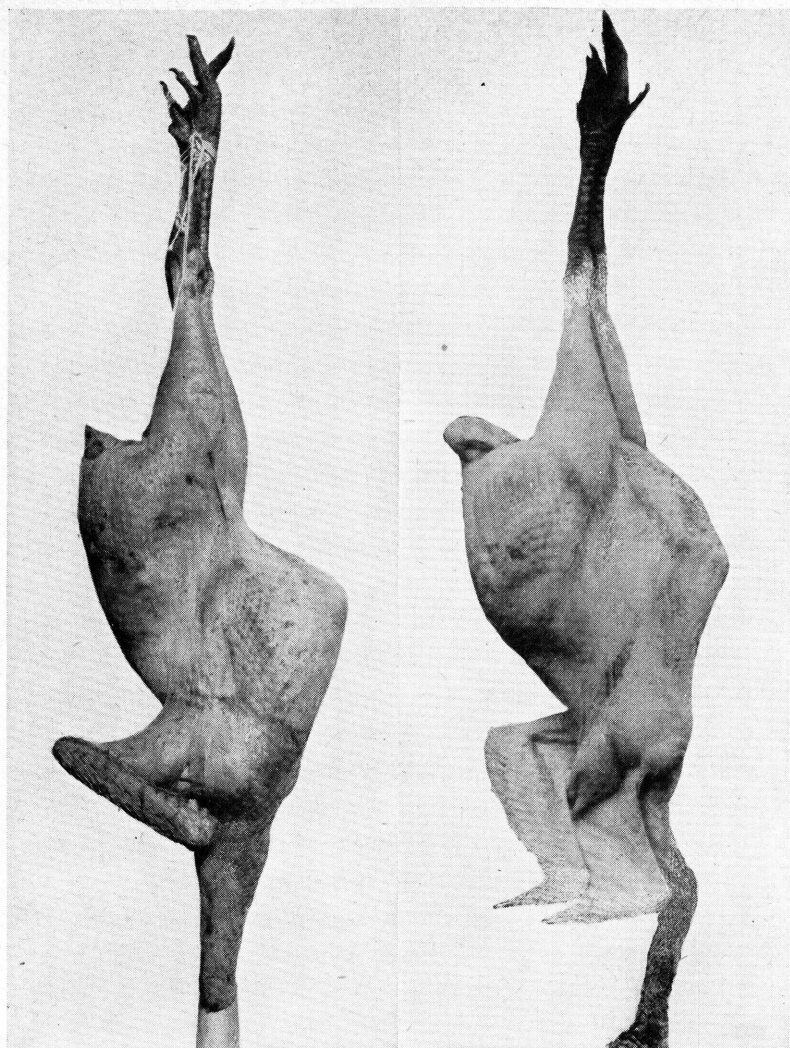
Blue back means that the skin has turned a bluish-green color because of color pigment development in the skin. It is prevalent in flocks in which tail picking has occurred. It is commonly found on the backs of breeder hens that have been injured by the treading of the toms. It is permitted only on the tail of a bird of A Quality, and no farther forward than the hip on a bird of B Quality. The size of these discolored areas is designated in the quality specifications. (Fig. 12 (right).)

WEIGHT SPECIFICATIONS

Under the United States standards the weight of the individual bird is not a factor in determining its quality or grade. If a turkey has the required fleshing characteristics and other qualities, it may be placed in the top quality or grade regardless of its weight.

It is always desirable to pack the smaller turkeys separate from the larger ones and mark them accordingly. The weight of individual Young Toms and Hens in a box should not vary more than 2 pounds per bird. The recommended weight classifications for young birds are as follows: 8 to 10 pounds, over 10 to 12 pounds, etc.

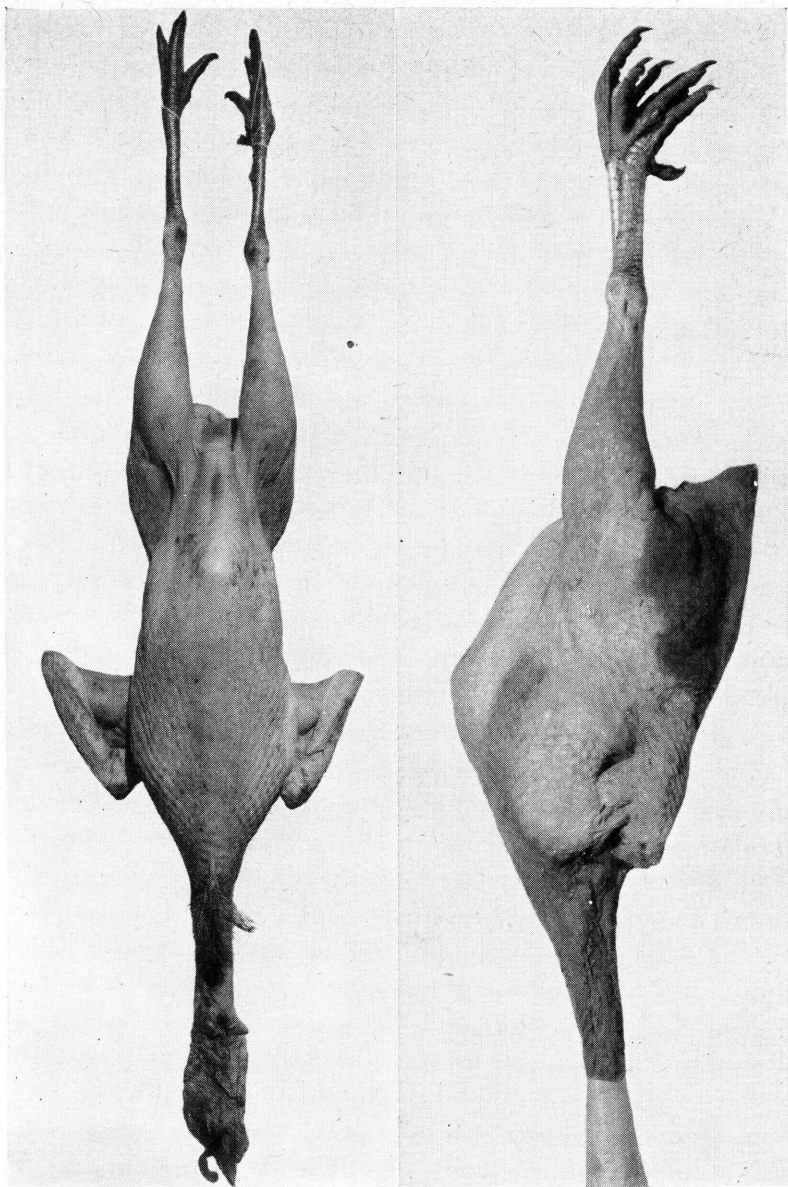
Mature (Old) turkeys should be graded and packed to not more than a 5-pound variation in the weight of the individual birds in a box. Recommended weight classifications for Mature (Old) Toms and Hens are as follows: 10 to 15 pounds, over 15 to 20 pounds, etc.



8782c OD neg.

8813 OD neg.

FIGURE 11.—(Left) *Turkey with a peaked breastbone.* (Right) *Turkey with a hunched back.* These are considered serious deformities, but since these turkeys are fairly well fleshed, they will grade as C Quality.



8819c OD neg.

8783a OD neg.

FIGURE 12.—(Left) A staggy young tom. As the spurs and head are well developed and the breast has become puffed and flabby, this turkey is a B Quality young tom. (Right) Blue-back turkey. The discoloration extends beyond the tail and half way to the hips. This turkey would be graded as B Quality.

GRADE LABEL AND STAMP

When individual turkeys are officially graded according to United States standards, each turkey may be individually labeled with its United States grade. The grade label or seal that is used on the bird also gives the class of the turkey. (Fig. 13.)



FIGURE 13.—Metal seal used to label the grade on an individual turkey. It is usually attached to the skin of the neck or the web of the wing.



FIGURE 14.—Impression of a Government stamp used in marking packages. These stamps are issued only to licensed turkey graders.

The label is fastened to the carcass by means of an approved seal and cannot be removed without destroying the seal. Distinctive labels are recommended for use in identifying the different grades. Turkeys of C Quality are not individually labeled. If the packer or shipper of U. S. Grade A or U. S. Grade B turkeys has the individual turkeys labeled, he may have the outside of the package stamped with the Government grade. This stamp gives the grade of the turkeys in the package, and the plant's or the grader's number. (Fig. 14.)

LICENSE CARD

When the applicant has been examined and found to possess the proper qualifications to grade turkeys in accordance with the United States standards, he is eligible to receive a grader's license card, which authorizes him to do this work. A grader's card is not issued, however, unless the applicant has grading work to perform for an individual or firm who has applied for the grading service to the agency with which the Production and Marketing Administration is cooperating in carrying on the grading work. The license card empowers the grader to certify to the class, grade, and condition of dressed turkeys. The signature of a representative of the Production and Marketing Administration is affixed to the card. The date on which the card becomes invalid is plainly marked on the card. These cards are issued only from season to season and must be renewed each year.

Persons who have a financial interest in the turkeys to be graded—for instance, plant or pool managers or their close relatives—are not eligible to be licensed. Generally producers are not licensed to grade their own turkeys.

As soon as the expiring date has been reached or as soon as the grader has finished his work for the season, the license card must be returned to his immediate superior officer, who must return it to the Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

An individual receiving his salary from the plant or cooperative pool for which grading work is done, may be licensed if he is under bond.

GRADING CERTIFICATE

A grading certificate is issued for each lot or car of turkeys graded. (Fig. 15.) The original and one copy of the certificate are delivered to the shipper or to the receiver of the turkeys, whichever applied for the grading, and two copies are sent to the supervisor. The grader may retain a copy. The certificate is typewritten whenever practicable, and on it is supplied full information regarding the number of boxes of each class and grade in the lot, the net weight of each class and grade, and other valuable information. It also states the condition of the carcasses.

The fee charged for turkey grading services may be based either on fee and expenses or on the basis of a contract with the applicant, as shown on the sample certificate. When services are rendered on a contract basis the word "contract" is inserted in place of the actual fee and no expenses are shown under that heading.

Each certificate is signed by the grader, who certifies to the truth of the statements contained therein.

The certificates are serially numbered, and a record of each is kept. When a certificate is lost or destroyed, the grader must immediately notify his superior officer. If the certificate should be torn, soiled, or incorrectly made out, it must be marked "void" and sent to the supervising grader. At the close of the grading season all unused grading certificates must be mailed immediately to the State supervisor.

REGRADEING AT TERMINAL MARKETS

The terminal-market buyer or receiver of a lot or car of turkeys, which was graded at shipping point according to the United States standards, may obtain a regrading of the lot at any terminal market at which the United States grading service on turkeys is available. If regrading is done at the terminal market, the regrading certificate supersedes the certificate issued at the shipping point. Therefore if the grading at the shipping point is not done correctly, it will be recognized and the offending party called upon to correct his mistake or make amends for it.

OUTSTANDING CONSIDERATIONS IN GRADING

The grader should always bear in mind the three factors of major importance that determine the quality or grade of a dressed turkey:

(1) The quantity of flesh on the carcass in comparison with the quantity of the inedible portion, (2) the quality of the flesh, and (3) the sales appeal of the bird as typified by its appearance. A turkey must rate high in all three of these factors in order to meet the requirements for A Quality.

Form OMS-495
February 1944
(10-7-44)

UNITED STATES DEPARTMENT OF AGRICULTURE

Production and Marketing Administration

Nº 61605

SHIPPING POINT POULTRY GRADING CERTIFICATE

SAMPLE

This certificate is receivable in all Courts of the United States as prima facie evidence of the truth of the statements therein contained.

This certificate does not excuse failure to comply with any of the regulatory laws enforced by the United States Department of Agriculture or the Federal Food, Drug and Cosmetic Act.

This certificate issued in cooperation with Colorado State Department of Agriculture

Place issued Grand Junction, Colorado Date of loading October 14, 1948

To John Doe, Inc. Address Grand Junction, Colorado

* Shipper or seller John Doe, Inc. Address Grand Junction, Colorado

* Receiver or buyer Richard Doe Address Salt Lake City, Utah

I CERTIFY that in compliance with the regulations of the Secretary of Agriculture governing the grading of poultry, pursuant to the act making appropriations for the United States Department of Agriculture, I graded, on the date stated below, the poultry described below, and that the kind, class, grade, and/or condition of said poultry, when graded were as stated below:

Car initials and number ART 19582 Kind of car Refrigerator

Condition of car Good Drain Open Floor racks In place

Amount of ice Full Salt 15 % Opened 9:00 A. M. Temperature 28 degrees.

Closed 1:30 P. M. Temperature 36 degrees.

Description of poultry: Finish Good Color Bright Bloom Good How dressed Semi-scald

Total packages 177 Total pounds 22,117 Quantity examined All Kind of package Boxes

Average temperature holding room 10° F. Date of grading October 11-12, 1948

Internal temperature of poultry: Highest 36 Lowest 33

GRADES, CLASS, AND WEIGHTS

GRADE	CLASS		O. CLASS		Y. CLASS		O. CLASS		Y. CLASS		TOTAL	
	Pkgs.	Weight *	Pkgs.	Weight *	Pkgs.	Weight *	Pkgs.	Weight *	Pkgs.	Weight *	Pkgs.	Weight *
U.S. Grade A			2	252	22	2574			4	520	28	3346
U.S. Grade B			2	252	30	3510	13	1815	80	10100	125	15677
U.S. Grade C			1	127	2	230	1	137	20	2600	24	3094
TOTAL			5	631	54	6314	14	1952	104	13220	177	22117

*As stated by applicant.

Lot numbers and identifying marks: Each bird except U. S. C quality tagged with individual bird-grade label.

Remarks: _____



Packages (were) stamped with grade and plant numbers for identification.

Fee Contract

Expenses _____ Henry Smith Grader.

TOTAL _____ Address Grand Junction, Colorado

PLEASE REFER TO THIS CERTIFICATE BY NUMBER AND SHIPPING POINT

U. S. GOVERNMENT PRINTING OFFICE 16-17303-4

FIGURE 15.—Poultry grading certificate.

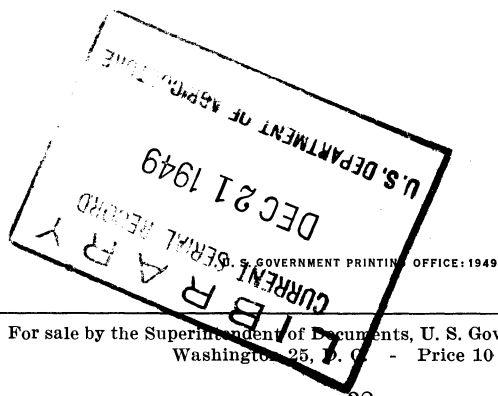
It is not enough for a turkey merely to be well-fleshed and soft-and tender-meated; it must also show good workmanship in dressing so that the sales value is not lowered by blemishes on the carcass, torn or abraded skin, pinfeathers, or other defects that spoil the appearance even though they may not lower the eating quality of the meat.

It is impossible for graders to render a satisfactory grading service according to the United States standards unless they have a thorough knowledge of the United States standards for classes, qualities, and grades of dressed turkeys. This is obtained by a careful study of the grade descriptions and the grading chart. A good grader soon comes to know almost at once the grade in which a carcass will be placed after an examination of the characteristics that determine its grade. This may appear difficult at first, but if the work is undertaken in a systematic way, the knowledge comes readily. To insure uniformity in grading some graders select, early in the day, a number of turkeys that are fully typical of each grade and hang them on a rack where they can be conveniently referred to. Then if there is doubt in regard to any bird graded later, a comparison with those on the rack will indicate the correct grade. Graders are expected to attend one of the turkey-grading schools held in various parts of the country each year to keep in touch with newest developments and in line with other graders.

There are always a number of turkeys near the median line between two qualities. In grading at a shipping point such "border line birds" are usually placed in the lower grade because natural changes, occurring in transit, often would necessitate placing them in a lower grade quality by the time they reach the market. When the grading is done at the terminal market the border line birds may more safely be placed in the higher grade.

When producers bring dressed turkeys to concentration plants they may want information about the methods of grading or reasons for placing a certain bird in a certain grade. Graders who are supervised by the Government are advised to make careful and patient explanation to all inquirers who have an interest in the birds being handled.

Graders keep in close touch with the State supervisor who is their immediate supervising officer. In case of dispute or uncertainty this supervisor is consulted. The supervisor is held responsible for the grading work in his State and, in turn, holds each grader responsible for the work performed by him. Through these and similar measures a grading service has been built up that is gradually benefiting producers, dealers, and consumers.



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